

Application for FCC Certificate
On Behalf of
LG Electronics U.S.A., Inc.

LCD Monitor

Model No.: L1742PMT

Serial No.: E08081601

FCC ID : BEJL1742HT

Prepared For : LG Electronics U.S.A., Inc.
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Report No. : ACI-F08060
Date of Test : Aug 21 – 22, 2008
Date of Report : Aug 22, 2008

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TEST REPORT FOR FCC CERTIFICATE

Applicant : LG Electronics U.S.A., Inc.
Manufacturer : LG Electronics Nanjing Display Co., Ltd.
EUT Description : LCD Monitor
(A) Model No. : L1742PMT
(B) Serial No. : E08081601
(C) Power Supply : 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2007
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) and ICES-003, Issue 4 February 2004 (CISPR 22:2002) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: L1742PMT; S/N: E08081601) which was tested in 3m anechoic chamber on Aug 21 – 22, 2008 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Aug 21 – 22, 2008

Prepared By: Zeno Gu 2008.08.27
ZENO GU / Assistant

Reviewer: Dio Yang 2008.8.27
DIO YANG / Supervisor

 For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Approved Signatory: Sammy Chen 2008.08.27
Authorized Signature EMC SAMMY CHEN / Assistant Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2007 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2007 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description	:	LCD Monitor
Type of EUT	:	☒ Production ☐ Pre-product ☐ Pro-type
Model No.	:	L1742PMT
Serial No.	:	E08081601
Real Power	:	31.50W
Note	:	The data of L1742PMT at rotate 90 degree condition (only radiated emission) is also tested and recorded in this report. The mode tested was the worst case of L1742PMT in normal condition.
Applicant	:	LG Electronics U.S.A., Inc. 1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, United States
Manufacturer	:	LG Electronics Nanjing Display Co., Ltd. No.346, Yao Xin Road, Economic & Technical Development Zone, Nanjing, China
LCD Panel	:	Manufacturer: LG Display M/N : LM170E03 (TL) (G2)
Max Resolution	:	D-Sub 1280*1024@75Hz DVI 1280*1024@60Hz
D-Sub Cable	:	Shielded, Detachable, 1.85m, with two cores
DVI Cable	:	Shielded, Detachable, 1.90m, with two cores
Audio Cable	:	Shielded, Detachable, 1.50m, without core
Power Cord	:	Unshielded, Detachable, 1.80m

Remark:

The EUT is a LCD Monitor which input/output ports as follows:

- | | |
|--------------------|------------------------|
| (1) One D-Sub Port | : Connected with PC |
| (2) One DVI Port | : Connected with PC |
| (3) One Audio Port | : Connected with PC |
| (4) One AC In Port | : Connected with Power |

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : dx7400MT
Serial Number : CNG8130K89
Power Cord : Unshielded, Detachable, 1.8m
Certificate : FCC DoC; CE/EMC; VCCI; C-Tick; UL
BSMI (R33001) 3C (A000111)
MIC (E-A011-04-2659(B))

2.2.2 Printer

Manufacturer : HP
Model Number : C3990A
Serial Number : JPZX020487
Data Cable : Shielded, Detachable, 1.5m
Certificate : GS, CE/EMC, C-Tick, FCC DoC

2.2.3 Keyboard

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 7668200662248
Data Cable : Shielded, Undetachable, 1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick,
BSMI

2.2.4 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, Undetachable, 1.85m.
Certificate : FCC DoC, VCCI, CE/EMC, MIC, GS

2.2.5 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.8m
Certificate : FCC DoC, CE/EMC, CCC

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
July 26, 2006 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 1.84 dB
Radiated Emission Expanded Uncertainty : U = 2.96 dB

3 CONDUCTED EMISSION TEST

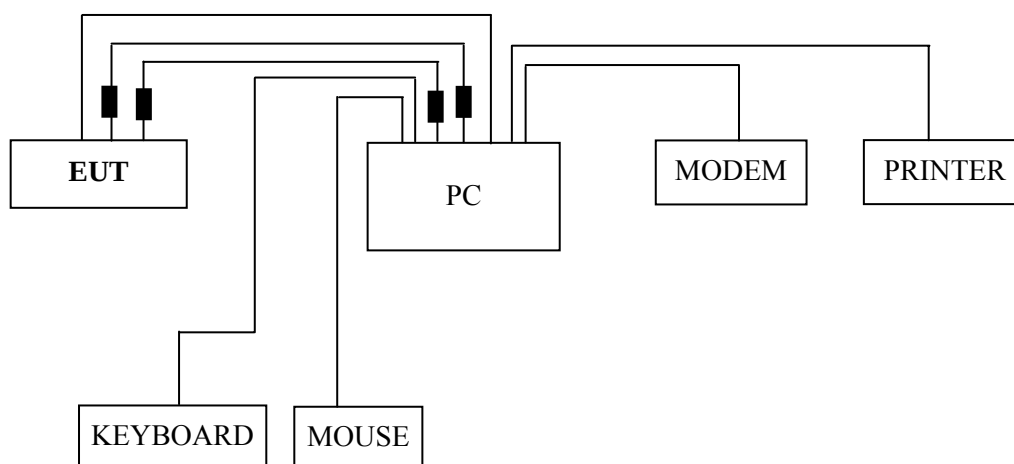
3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESHS10	830223/007	Apr 02, 2008	Apr 02, 2009
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2008	Apr 02, 2009
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2008	Apr 02, 2009
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 19, 2008	Sep 19, 2008
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2008	Apr 02, 2009
6.	Software	Audix	E3	SET00200 9804M592	--	--

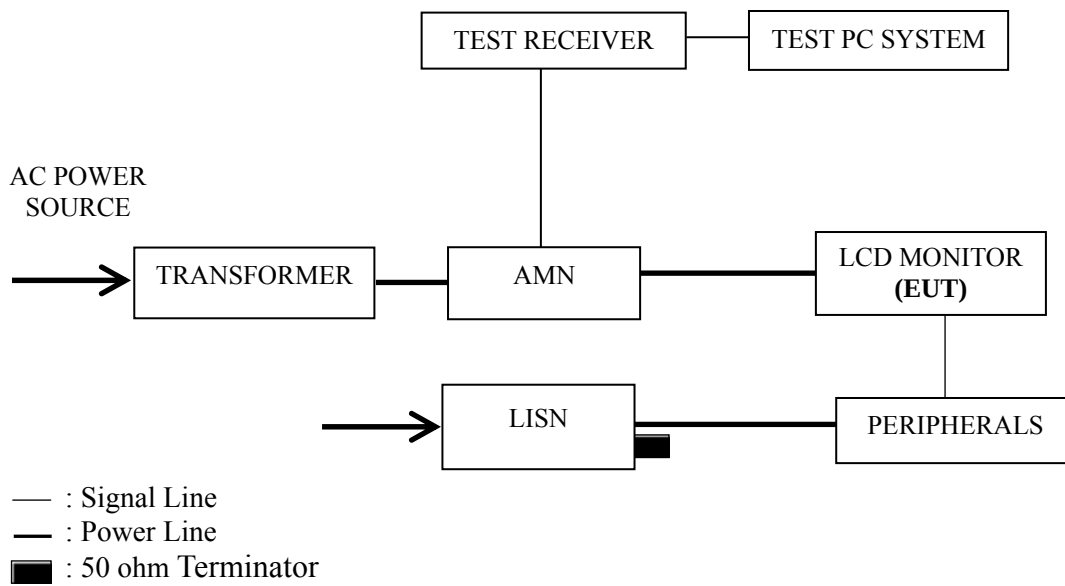
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■ : Ferrite core

3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE 1 – The lower limit shall apply at the transition frequencies.
 NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub & DVI Input).

3.5.5 PC system played music and sent audio signal to EUT through the audio in port of EUT.

3.5.6 Repeat above procedure from 3.5.3 to 3.5.5 for difference test mode.

3.5.7 The other peripherals devices were driven and operated during the test.

3.5.8 The test modes are as follows:

Test Mode
D-Sub 640*480@60Hz
D-Sub 1024*768@60Hz
D-Sub 1280*1024@75Hz
DVI 640*480@60Hz
DVI 1024*768@60Hz
DVI 1280*1024@60Hz

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESHS10 was set at 10 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< **PASS** >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Data Page
D-Sub 640*480@60Hz	P12
D-Sub 1024*768@60Hz	P13
D-Sub 1280*1024@75Hz	P14
DVI 640*480@60Hz	P15
DVI 1024*768@60Hz	P16
DVI 1280*1024@60Hz	P17

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst case is for D-Sub 1280*1024@75Hz test mode. The worst emission is detected at 4.292 MHz (Average Value) with corrected signal level of 40.87 dB (μV) (limit is 46.00 dB (μV)), when the Line of the EUT is connected to AMN.

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 21, 2008

Test Mode : D-Sub 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.210	42.80	0.15	42.95	63.21	20.26	QP
	0.282	38.80	0.15	38.95	60.76	21.81	
	0.422	35.20	0.17	35.37	57.41	22.04	
	0.847	32.50	0.19	32.69	56.00	23.31	
	4.220	46.10	0.28	46.38	56.00	9.62	
	4.650	40.20	0.28	40.48	56.00	15.52	
	0.210	36.80	0.15	36.95	53.21	16.26	AV
	0.282	34.70	0.15	34.85	50.76	15.91	
	0.422	33.10	0.17	33.27	47.41	14.14	
	0.847	29.00	0.19	29.19	46.00	16.81	
	4.220	38.00	0.28	38.28	46.00	7.72	
	4.574	34.71	0.28	34.99	46.00	11.01	
Neutral	0.213	41.57	0.15	41.72	63.10	21.38	QP
	0.282	38.39	0.15	38.54	60.76	22.22	
	0.421	34.57	0.17	34.74	57.42	22.68	
	0.844	33.87	0.17	34.04	56.00	21.96	
	4.292	42.99	0.25	43.24	56.00	12.76	
	4.647	40.95	0.25	41.20	56.00	14.80	
	0.213	36.57	0.15	36.72	53.10	16.38	AV
	0.282	30.39	0.15	30.54	50.76	20.22	
	0.421	28.57	0.17	28.74	47.42	18.68	
	0.844	27.87	0.17	28.04	46.00	17.96	
	4.292	35.99	0.25	36.24	46.00	9.76	
	4.647	35.95	0.25	36.20	46.00	9.80	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 21, 2008

Test Mode : D-Sub 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.211	41.35	0.15	41.50	63.18	21.68	QP
	0.282	35.94	0.15	36.09	60.76	24.67	
	0.421	33.65	0.17	33.82	57.42	23.60	
	0.701	31.24	0.18	31.42	56.00	24.58	
	3.860	40.80	0.28	41.08	56.00	14.92	
	4.292	45.35	0.28	45.63	56.00	10.37	
	0.211	37.35	0.15	37.50	53.18	15.68	AV
	0.282	31.94	0.15	32.09	50.76	18.67	
	0.421	27.65	0.17	27.82	47.42	19.60	
	0.701	26.24	0.18	26.42	46.00	19.58	
	3.860	35.80	0.28	36.08	46.00	9.92	
	4.292	39.35	0.28	39.63	46.00	6.37	
Neutral	0.213	41.43	0.15	41.58	63.10	21.52	QP
	0.282	38.16	0.15	38.31	60.76	22.45	
	0.352	35.52	0.16	35.68	58.91	23.23	
	0.844	34.69	0.17	34.86	56.00	21.14	
	4.292	42.33	0.25	42.58	56.00	13.42	
	4.574	40.99	0.25	41.24	56.00	14.76	
	0.213	37.43	0.15	37.58	53.10	15.52	AV
	0.282	33.16	0.15	33.31	50.76	17.45	
	0.352	30.52	0.16	30.68	48.91	18.23	
	0.844	29.69	0.17	29.86	46.00	16.14	
	4.292	37.33	0.25	37.58	46.00	8.42	
	4.647	36.25	0.25	36.50	46.00	9.50	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 21, 2008

Test Mode : D-Sub 1280*1024@75Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.211	40.43	0.15	40.58	63.18	22.60	QP
	0.282	35.22	0.15	35.37	60.76	25.39	
	0.421	33.67	0.17	33.84	57.42	23.58	
	0.701	31.62	0.18	31.80	56.00	24.20	
	0.844	30.30	0.19	30.49	56.00	25.51	
	4.292	45.59	0.28	45.87	56.00	10.13	
	0.211	35.43	0.15	35.58	53.18	17.60	AV
	0.282	29.22	0.15	29.37	50.76	21.39	
	0.421	27.67	0.17	27.84	47.42	19.58	
	0.701	25.62	0.18	25.80	46.00	20.20	
	0.844	23.30	0.19	23.49	46.00	22.51	
	4.292	40.59	0.28	40.87	46.00	5.13	
Neutral	0.213	41.39	0.15	41.54	63.10	21.56	QP
	0.282	35.33	0.15	35.48	60.76	25.28	
	0.421	34.87	0.17	35.04	57.42	22.38	
	0.701	33.63	0.18	33.81	56.00	22.19	
	0.844	33.11	0.17	33.28	56.00	22.72	
	4.292	42.87	0.25	43.12	56.00	12.88	
	0.213	35.39	0.15	35.54	53.10	17.56	AV
	0.282	29.33	0.15	29.48	50.76	21.28	
	0.421	27.87	0.17	28.04	47.42	19.38	
	0.701	28.63	0.18	28.81	46.00	17.19	
	0.844	27.11	0.17	27.28	46.00	18.72	
	4.292	37.87	0.25	38.12	46.00	7.88	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 21, 2008

Test Mode : DVI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.211	39.99	0.15	40.14	63.18	23.04	QP
	0.282	37.00	0.15	37.15	60.76	23.61	
	0.421	33.67	0.17	33.84	57.42	23.58	
	0.701	31.87	0.18	32.05	56.00	23.95	
	3.860	40.88	0.28	41.16	56.00	14.84	
	4.292	44.61	0.28	44.89	56.00	11.11	
	0.211	34.99	0.15	35.14	53.18	18.04	AV
	0.282	32.00	0.15	32.15	50.76	18.61	
	0.421	28.67	0.17	28.84	47.42	18.58	
	0.701	26.87	0.18	27.05	46.00	18.95	
	3.860	34.88	0.28	35.16	46.00	10.84	
	4.292	39.61	0.28	39.89	46.00	6.11	
Neutral	0.209	40.45	0.15	40.60	63.23	22.63	QP
	0.282	38.16	0.15	38.31	60.76	22.45	
	0.421	34.23	0.17	34.40	57.42	23.02	
	0.701	33.27	0.18	33.45	56.00	22.55	
	0.844	32.45	0.17	32.62	56.00	23.38	
	4.292	42.31	0.25	42.56	56.00	13.44	
	0.209	34.45	0.15	34.60	53.23	18.63	AV
	0.282	32.16	0.15	32.31	50.76	18.45	
	0.421	28.23	0.17	28.40	47.42	19.02	
	0.701	28.27	0.18	28.45	46.00	17.55	
	0.844	26.45	0.17	26.62	46.00	19.38	
	4.292	38.31	0.25	38.56	46.00	7.44	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 21, 2008

Test Mode : DVI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.211	40.15	0.15	40.30	63.18	22.88	QP
	0.282	36.96	0.15	37.11	60.76	23.65	
	0.421	33.63	0.17	33.80	57.42	23.62	
	0.701	33.56	0.18	33.74	56.00	22.26	
	4.292	43.33	0.28	43.61	56.00	12.39	
	6.186	35.35	0.29	35.64	60.00	24.36	
	0.211	35.15	0.15	35.30	53.18	17.88	AV
	0.282	31.96	0.15	32.11	50.76	18.65	
	0.421	28.63	0.17	28.80	47.42	18.62	
	0.701	27.56	0.18	27.74	46.00	18.26	
	4.292	38.33	0.28	38.61	46.00	7.39	
	6.186	30.35	0.29	30.64	50.00	19.36	
Neutral	0.211	40.77	0.15	40.92	63.18	22.26	QP
	0.282	37.60	0.15	37.75	60.76	23.01	
	0.421	34.51	0.17	34.68	57.42	22.74	
	0.701	33.27	0.18	33.45	56.00	22.55	
	0.844	32.67	0.17	32.84	56.00	23.16	
	4.292	42.37	0.25	42.62	56.00	13.38	
	0.211	35.77	0.15	35.92	53.18	17.26	AV
	0.282	31.60	0.15	31.75	50.76	19.01	
	0.421	29.51	0.17	29.68	47.42	17.74	
	0.701	28.27	0.18	28.45	46.00	17.55	
	0.844	27.67	0.17	27.84	46.00	18.16	
	4.292	38.37	0.25	38.62	46.00	7.38	

TEST ENGINEER: TOM SI

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 21, 2008

Test Mode : DVI 1280*1024@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.209	39.85	0.15	40.00	63.23	23.23	QP
	0.282	36.78	0.15	36.93	60.76	23.83	
	0.421	33.61	0.17	33.78	57.42	23.64	
	0.844	30.12	0.19	30.31	56.00	25.69	
	4.292	45.37	0.28	45.65	56.00	10.35	
	6.186	35.65	0.29	35.94	60.00	24.06	
	0.209	33.85	0.15	34.00	53.23	19.23	AV
	0.282	30.78	0.15	30.93	50.76	19.83	
	0.421	24.61	0.17	24.78	47.42	22.64	
	0.844	23.12	0.19	23.31	46.00	22.69	
	4.292	38.20	0.28	38.48	46.00	7.52	
	6.186	30.65	0.29	30.94	50.00	19.06	
Neutral	0.211	40.83	0.15	40.98	63.18	22.20	QP
	0.282	39.26	0.15	39.41	60.76	21.35	
	0.421	34.43	0.17	34.60	57.42	22.82	
	0.844	33.11	0.17	33.28	56.00	22.72	
	4.292	42.13	0.25	42.38	56.00	13.62	
	5.277	37.12	0.25	37.37	60.00	22.63	
	0.211	33.83	0.15	33.98	53.18	19.20	AV
	0.282	34.26	0.15	34.41	50.76	16.35	
	0.421	28.43	0.17	28.60	47.42	18.82	
	0.844	27.11	0.17	27.28	46.00	18.72	
	4.292	37.13	0.25	37.38	46.00	8.62	
	5.277	31.12	0.25	31.37	50.00	18.63	

TEST ENGINEER: TOM SI

4 RADIATED EMISSION TEST

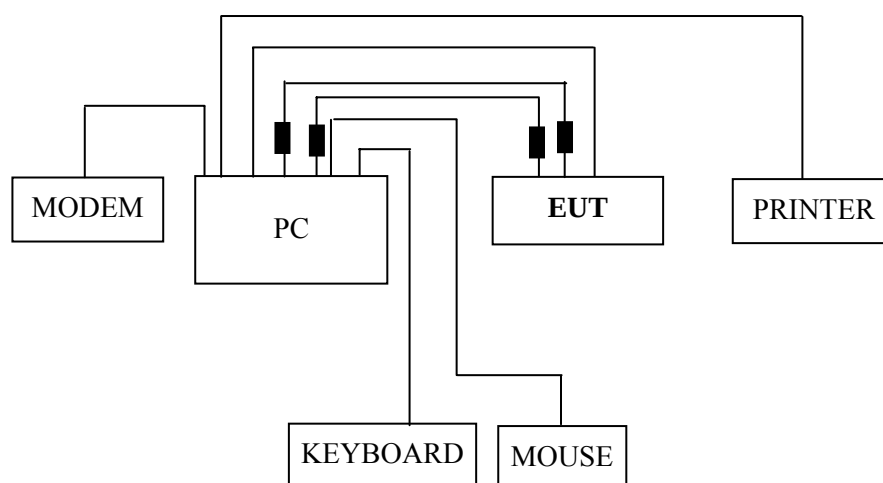
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2008	Mar 07, 2009
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 19, 2008	Sep 19, 2008
3.	Preamplifier	HP	8449B	3008A00864	May 19, 2008	May 19, 2009
4.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2009
5.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2008	May 19, 2009
6.	Software	Audix	E3	SET00200 9912M295-2	--	--

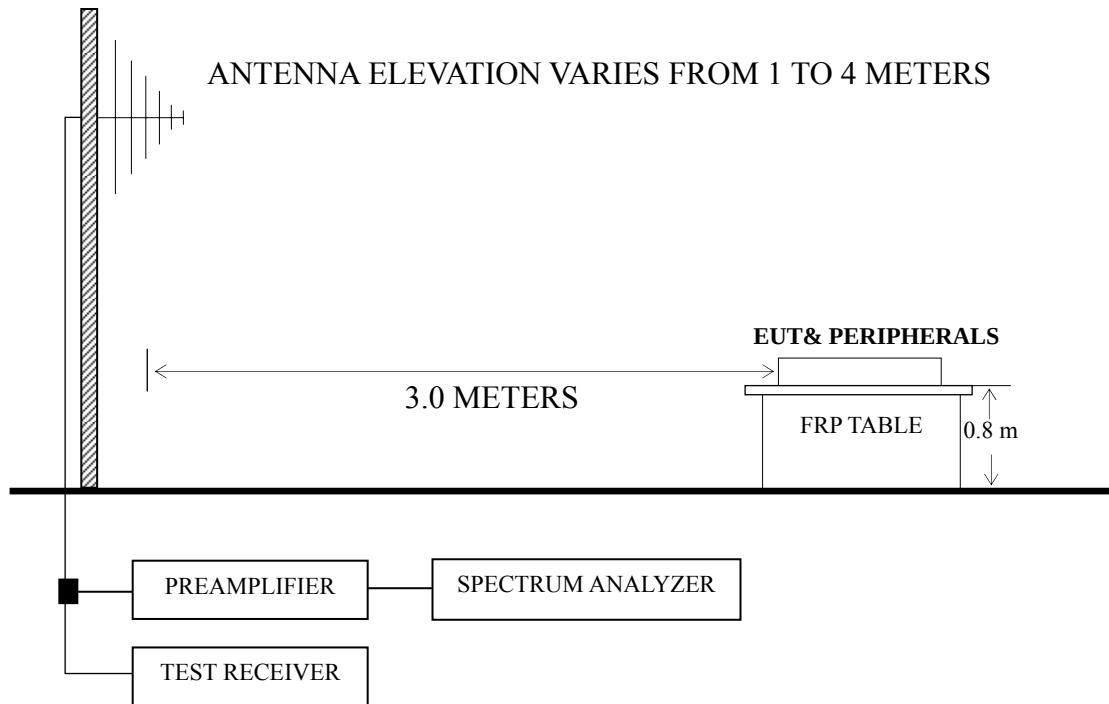
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■ : Ferrite core

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.

NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz below 1GHz and The Spectrum Agilent E7405A was set at 1MHz above 1GHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The frequency range from 1 GHz to 2 GHz was checked for D-Sub 1280*1024@75Hz, DVI 1280*1024@60Hz and D-Sub 1280*1024@75Hz (Rotate 90 degree) modes.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Data Page
D-Sub 640*480@60Hz	P22
D-Sub 1024*768@60Hz	P23
D-Sub 1280*1024@75Hz	P24
DVI 640*480@60Hz	P25
DVI 1024*768@60Hz	P26
DVI 1280*1024@60Hz	P27
D-Sub 1280*1024@75Hz (Rotate 90 degree)	P28

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.($< 1\text{GHz}$)

NOTE 2 – Emission Level = Antenna Factor + Cable Loss – Preamp Factor + Meter Reading.($> 1\text{GHz}$)

NOTE 3 – The emission levels that are 20dB below the official limit are not reported.

NOTE 4 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 5 – All reading are Quasi-Peak values below or equal to 1GHz and Peak values above 1GHz. For measurements above 1 GHz, the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

NOTE 6 – The worst case is for D-Sub 1280*1024@75Hz test mode. The worst emission at horizontal polarization was detected at 321.000 MHz with corrected signal level of 36.04 dB ($\mu\text{V/m}$) (limit is 46.00 dB ($\mu\text{V/m}$)), when the antenna was 1.20 m height and the turntable was at 310° . The worst emission at vertical polarization was detected at 32.910 MHz with corrected signal level of 36.92 dB ($\mu\text{V/m}$) (limit is 40.00 dB ($\mu\text{V/m}$)), when the antenna was 1.00 m height and the turntable was at 220° .

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : D-Sub 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	112.450	16.03	12.51	1.80	30.34	43.50	13.16
	233.700	16.68	12.28	2.66	31.62	46.00	14.38
	336.520	14.63	14.94	3.32	32.89	46.00	13.11
	394.720	15.92	16.40	3.59	35.91	46.00	10.09
	505.300	12.81	17.95	4.00	34.76	46.00	11.24
	616.850	8.25	19.29	4.34	31.88	46.00	14.12
Vertical	30.970	16.81	19.03	0.91	36.75	40.00	3.25
	113.420	21.21	12.58	1.81	35.60	43.50	7.90
	132.820	20.94	12.40	1.97	35.31	43.50	8.19
	223.030	22.97	11.80	2.56	37.33	46.00	8.67
	337.490	20.78	14.94	3.32	39.04	46.00	6.96
	508.210	15.84	18.01	4.02	37.87	46.00	8.13

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : D-Sub 1024*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	81.410	13.53	8.02	1.53	23.08	40.00	16.92
	132.820	17.51	12.40	1.97	31.88	43.50	11.62
	172.590	15.24	10.11	2.20	27.55	43.50	15.95
	225.940	18.04	11.94	2.58	32.56	46.00	13.44
	322.940	17.07	14.54	3.25	34.86	46.00	11.14
	432.550	7.56	16.95	3.74	28.25	46.00	17.75
Vertical	32.910	45.43	17.95	0.92	36.04	40.00	3.96
	53.280	49.18	8.14	1.07	30.26	40.00	9.74
	172.590	46.03	10.11	2.20	30.50	43.50	13.00
	228.850	45.45	12.07	2.62	32.52	46.00	13.48
	325.850	42.10	14.62	3.27	32.75	46.00	13.25
	376.290	40.91	15.99	3.50	33.26	46.00	12.74

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : D-Sub 1280*1024@75Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	133.790	16.51	12.35	1.97	--	30.83	43.50	12.67	QP
	156.100	18.65	10.79	2.11	--	31.55	43.50	11.95	
	228.850	19.97	12.07	2.62	--	34.66	46.00	11.34	
	321.000	18.35	14.46	3.23	--	36.04	46.00	9.96	
	431.580	12.39	16.95	3.74	--	33.08	46.00	12.92	
	808.910	8.35	20.77	5.42	--	34.54	46.00	11.46	
	1307.000	56.09	24.58	7.58	36.93	51.32	74.00	22.68	PK
	1404.000	52.90	25.24	8.01	36.72	49.43	74.00	24.57	
	1512.000	53.46	25.88	8.43	36.51	51.26	74.00	22.74	
	1620.000	52.53	26.45	8.78	36.31	51.45	74.00	22.55	
	1727.000	52.29	26.72	9.07	36.12	51.96	74.00	22.04	
	1842.000	51.26	27.12	9.48	35.93	51.93	74.00	22.07	
Vertical	32.910	18.05	17.95	0.92	--	36.92	40.00	3.08	QP
	52.310	20.96	8.41	1.04	--	30.41	40.00	9.59	
	132.820	14.51	12.40	1.97	--	28.88	43.50	14.62	
	156.100	18.03	10.79	2.11	--	30.93	43.50	12.57	
	224.970	17.87	11.89	2.58	--	32.34	46.00	13.66	
	372.410	14.82	15.92	3.48	--	34.22	46.00	11.78	
	1051.000	60.71	22.76	6.79	37.55	52.71	74.00	21.29	PK
	1210.000	56.42	23.78	7.16	37.15	50.21	74.00	23.79	
	1252.000	55.75	24.10	7.33	37.05	50.13	74.00	23.87	
	1497.000	53.65	25.80	8.43	36.53	51.35	74.00	22.65	
	1557.000	52.64	26.15	8.57	36.42	50.94	74.00	23.06	
	1727.000	52.00	26.72	9.07	36.12	51.67	74.00	22.33	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : DVI 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	112.450	19.68	12.51	1.80	33.99	43.50	9.51
	137.670	21.05	12.19	1.99	35.23	43.50	8.27
	222.060	21.29	11.75	2.56	35.60	46.00	10.40
	373.380	16.89	15.92	3.48	36.29	46.00	9.71
	449.040	16.27	17.20	3.80	37.27	46.00	8.73
	510.150	15.59	18.04	4.02	37.65	46.00	8.35
Vertical	31.940	16.66	18.49	0.92	36.07	40.00	3.93
	114.390	20.82	12.64	1.81	35.27	43.50	8.23
	214.300	22.06	11.35	2.48	35.89	43.50	7.61
	339.430	20.70	15.03	3.33	39.06	46.00	6.94
	405.390	18.68	16.57	3.64	38.89	46.00	7.11
	569.320	16.30	18.84	4.16	39.30	46.00	6.70

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : DVI 1024*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	83.350	20.89	8.30	1.55	30.74	40.00	9.26
	136.700	19.28	12.23	1.98	33.49	43.50	10.01
	223.030	23.41	11.80	2.56	37.77	46.00	8.23
	323.910	19.68	14.58	3.25	37.51	46.00	8.49
	433.520	16.31	16.97	3.74	37.02	46.00	8.98
	650.800	13.17	19.47	4.56	37.20	46.00	8.80
Vertical	31.940	16.68	18.49	0.92	36.09	40.00	3.91
	133.790	17.38	12.35	1.97	31.70	43.50	11.80
	160.950	19.02	10.48	2.14	31.64	43.50	11.86
	213.330	22.40	11.30	2.48	36.18	43.50	7.32
	379.200	16.83	16.06	3.52	36.41	46.00	9.59
	544.100	14.33	18.49	4.10	36.92	46.00	9.08

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : DVI 1280*1024@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	104.690	15.45	11.88	1.73	--	29.06	43.50	14.44	QP
	159.010	20.50	10.59	2.13	--	33.22	43.50	10.28	
	226.910	20.81	11.98	2.60	--	35.39	46.00	10.61	
	317.120	17.30	14.35	3.21	--	34.86	46.00	11.14	
	418.970	15.90	16.77	3.69	--	36.36	46.00	9.64	
	540.220	14.30	18.42	4.10	--	36.82	46.00	9.18	
	1252.000	54.38	24.10	7.33	37.05	48.76	74.00	25.24	PK
	1307.000	53.36	24.58	7.58	36.93	48.59	74.00	25.41	
	1364.000	53.20	24.98	7.84	36.80	49.22	74.00	24.78	
	1419.000	53.91	25.31	8.09	36.69	50.62	74.00	23.38	
	1512.000	53.27	25.88	8.43	36.51	51.07	74.00	22.93	
	1727.000	51.86	26.72	9.07	36.12	51.53	74.00	22.47	
Vertical	30.970	15.99	19.03	0.91	--	35.93	40.00	4.07	QP
	52.310	20.80	8.41	1.04	--	30.25	40.00	9.75	
	133.790	19.31	12.35	1.97	--	33.63	43.50	9.87	
	224.000	21.44	11.85	2.58	--	35.87	46.00	10.13	
	422.850	17.31	16.82	3.70	--	37.83	46.00	8.17	
	487.840	15.43	17.75	3.94	--	37.12	46.00	8.88	
	1054.000	60.21	22.76	6.79	37.54	52.22	74.00	21.78	PK
	1404.000	53.32	25.24	8.01	36.72	49.85	74.00	24.15	
	1497.000	54.19	25.80	8.43	36.53	51.89	74.00	22.11	
	1569.000	53.50	26.22	8.64	36.40	51.96	74.00	22.04	
	1754.000	52.26	26.80	9.24	36.07	52.23	74.00	21.77	
	1842.000	51.16	27.12	9.48	35.93	51.83	74.00	22.17	

TEST ENGINEER: RAVEN JIN

EUT : LCD Monitor Temperature : 22°C

Model No. : L1742PMT Humidity : 60%RH

Serial No. : E08081601 Date of Test : Aug 22, 2008

Test Mode : D-Sub 1280*1024@75Hz
(Rotate 90 degree)

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)	Remark
Horizontal	180.350	22.97	9.90	2.24	--	35.11	43.50	8.39	QP
	230.790	24.45	12.15	2.64	--	39.24	46.00	6.76	
	322.940	20.28	14.54	3.25	--	38.07	46.00	7.93	
	430.610	17.60	16.92	3.74	--	38.26	46.00	7.74	
	644.010	12.09	19.42	4.53	--	36.04	46.00	9.96	
	859.350	10.61	21.31	5.57	--	37.49	46.00	8.51	
	1404.000	53.85	25.24	8.01	36.72	50.38	74.00	23.62	PK
	1512.000	53.84	25.88	8.43	36.51	51.64	74.00	22.36	
	1620.000	52.87	26.45	8.78	36.31	51.79	74.00	22.21	
	1727.000	50.89	26.72	9.07	36.12	50.56	74.00	23.44	
	1844.000	49.94	27.17	9.48	35.93	50.66	74.00	23.34	
	1404.000	53.85	25.24	8.01	36.72	50.38	74.00	23.62	
Vertical	34.850	17.79	16.97	0.93	--	35.69	40.00	4.31	QP
	56.190	23.95	7.46	1.13	--	32.54	40.00	7.46	
	133.790	20.67	12.35	1.97	--	34.99	43.50	8.51	
	209.450	22.31	11.13	2.43	--	35.87	43.50	7.63	
	323.910	17.46	14.58	3.25	--	35.29	46.00	10.71	
	484.930	12.01	17.73	3.94	--	33.68	46.00	12.32	
	1052.000	60.37	22.76	6.79	37.55	52.37	74.00	21.63	PK
	1259.000	56.11	24.19	7.41	37.03	50.68	74.00	23.32	
	1404.000	55.43	25.24	8.01	36.72	51.96	74.00	22.04	
	1567.000	53.27	26.22	8.64	36.40	51.73	74.00	22.27	
	1742.000	51.93	26.76	9.15	36.10	51.74	74.00	22.26	
	1892.000	51.11	27.45	9.65	35.86	52.35	74.00	21.65	

TEST ENGINEER: RAVEN JIN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Aluminum foil	T-308	50*30	DAEHUNG SUBSIDIARY MATERIALS.	See Appendix II Figure 01, 04, 18
Copper	No. 1181	--	3M	See Appendix II Figure 19